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ABSTRACT

The purpose of this study was to examine the hypothesis that the students of teachers who participated in in-service institutes in sociology would show greater gains in learning on examinations that the students of teachers who did not participate in sociology institutes. The examinations used were for short units developed by the curriculum project Sociological Resources for the Social Studies. Twelve short units, or episodes, were taught to nine thousand high school students in three hundred classrooms in central city, rural, and suburban areas. Student achievement was measured through the use of episode examinations administered to paired classes as pre-and posttests. The results did not support the hypothesis. Although there were gains in learning for all classes, the variation between the stimulus and control groups was not statistically significant. Limitations of the study include the small number of cases in several of the categories of comparison, the cognitive character of the achievement, testing instruments, and the use of a vclunteer teacher sample. Twelve appendices of the tabulated data are included. (VLW)

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THE EFFECT OF TEACHER PARTICIPATION IN IN-SERVICE INSTITUTES IN SOCIOLOGY ON STUDENT ACHIEVEMENT WITH SRSS MATERIALS

Remarks by:

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THE EFFECT OF TEACHER PARTICIPATION IN IN-SERVICE INSTITUTES IN SOCIOLOGY ON STUDENT ACHIEVEMENT WITH SRSS MATERIALS

Sponsors of in-service institutes for teachers and the people who conduct them have a very legitimate concern in wondering if the institutes make any difference in teacher effectiveness. A very meaningful test of the effectiveness of any changes in teaching behavior would be to measure gain in student achievement.

The purpose of this study was to examine the hypothesis that the students of teachers who participated in in-service institutes in sociology would show greater gains in learning on examinations than the students of teachers who did not participate in sociology institutes. The examinations used were for short units (called episodes) developed by the curriculum project Sociological Resources for the Social Studies (SRSS). The basic assumption underlying the study (suggested by Zevin's research[1]) was that in-service teacher training institutes can bring about significant improvement in teacher effectiveness, measured by changes in pupil achievement (adjusted for initial ability), if the institutes include intensive programs of training in more effective teaching methods.

The author is grateful to Robert C. Angell, Executive Director, and Robert S. McCargar, Staff Sociologist, of Sociological Resources for the Social Studies, for their helpful comments on this paper and to Claudia Flory for yeoman assistance in the data tabulation.

To a considerable extent, the basic research design* was developed by Hering[2] in a study of the 1967-68 SRSS test and evaluation program to the results of the last year of the SRSS project trials, 1969-70. Sociological Resources for the Social Studies is a curriculum development project of the American Sociological Association, supported by the National Science Foundation. The analysis of SRSS evaluation data in this paper closely parallels the techniques used in the Hering study.[3]

Hering concluded that there was little if any relationship between teacher preparation in sociology (measured by formal course work) and student performance with experimental sociological materials (short units called episodes). He suggested that in-service teacher institutes in sociology to be held during the 1969-70 school year and which would focus on SRSS materials might provide an opportunity to explore further the effect of variation in teacher preparation on student achievement.

Other sources provide little support for efforts to correlate teacher training with student achievement. Rosenshine,[4] in a review of research on stability of teacher effect on student achievement, identified the difficulty of estimating how instructional materials related to posttests could make a contribution to teacher effectiveness. Elsewhere, Rosenshine,[5] as part of a critical evaluation of a review of research on teaching behavior and student achievement (Campbell and Barnes[6]), observed that twelve studies employing interaction analysis provided no data for changing teacher training programs to improve teaching effectiveness.

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*As originally conceived--and as described in the *Paper and Symposia Abstracts* for the AERA meetings--this study was designed to measure the effectiveness of a single program of in-service training for teachers in changing student achievement. Scores on the test for one SRSS episode were to be compared for (1) a stimulus group of students whose teachers took part in an NSF-supported sociology institute, which included an intensive program of training in inquiry teaching, and (2) a control group of students whose teachers had participated in the national trial of the SRSS unit and who had had no similar institute experience. However, it was not possible to complete this project. The number of sociology institute participants who were able to teach the SRSS unit was not sufficient for rigorous statistical comparison. It was necessary, therefore, to shift the focus of the study from a rather narrow investigation of how a unitary well defined program of teacher training was correlated with aspects of teacher effectiveness to a broader search for relationships between student achievement and teacher participation in several recent sociology institutes.

Rice[7] reported that there was no significant difference in pupil performance between classes in which teachers had received intensive training in anthropology and in the use of curriculum materials prepared by the Anthropology Curriculum Project of the University of Georgia.

METHODS

The 1969-70 SRSS episode test and evaluation program was conducted primarily in six metropolitan areas: Minneapolis, Minnesota; Seattle, Washington; Corpus Christi, Texas; Atlanta, Georgia; Miami, Florida; and the San Francisco Bay Area. In-service institutes in sociology, supported by the National Science Foundation, were at that time in process at Emory University in Atlanta, the University of Miami in Miami, and the College of Notre Dame in Belmont, California. The directors and staff personnel of the three institutes agreed to coordinate episode trials by teachers participating in the institutes and by other teachers in their local areas.

Between September of 1969 and June of 1970 twelve episodes were taught to nearly nine thousand high school students in almost three hundred classrooms. Student achievement was measured through the use of episode examinations administered to paired classes as pre- and posttests so that prior achievement in the subject matter area could be used to adjust posttest scores. Figure 1 illustrates how pairing of classes operated so that one class of students could serve as the control group for another class studying a different episode.

Time ⟶	Before ⟶	Instruction ⟶	After
Class X	Test of Episode B	Teaching of Episode A	Test of Episode A
Class Y	Test of Episode A	Teaching of Episode B	Test of Episode B

Figure 1

Stated simply, Class X took the examination for Episode B to provide pretest data to measure learning gain by Class Y taking the same examination as a posttest after studying the episode and vice versa.

TABLE 1

NUMBER OF CLASSES AND STUDENTS PARTICIPATING IN SRSS TRIALS, 1969-70*

Mean Verbal Ability Level of Classes / Range of Scores on The Psychological Corporation College Qualification Test (CQT)	Pretest		Posttest	
	Classes	Students	Classes	Students
Very High 52.00-75.00	17	483	17	483
High 43.00-51.99	79	2,381	75	2,285
Average 36.00-42.99	81	2,510	81	2,510
Low 28.00-35.99	79	2,476	78	2,448
Very Low 0-27.99	42	1,133	41	1,097
TOTAL	298	8,983	292	8,823

*Posttests do not equal pretests because not all teachers finished the episode trials.

The test population was generally well-balanced in terms of student ability levels, socio-economic backgrounds, geographic distribution, and so forth. Schools participating in the trials were located in central city, rural, and suburban areas. Most trials classes were in public high schools, but there was some participation by parochial school students. Table 2 shows how trial classes were distributed between institute participants and teachers who did not participate in any of the institutes.

TABLE 2

SRSS EPISODE TRIAL TEACHERS
BY PARTICIPATION IN INSTITUTES

	Classes	Percent
Institute Teachers	68	23.13
Noninstitute Teachers	226	76.87
Total Episode Trial Classes	294	100.00

DATA SOURCES

Student ability was determined by the use of the verbal test of the College Qualification Test (CQT) of The Psychological Corporation which provides national norms for grade 12. The unit of comparison in this study is the episode trial class. Therefore, the ability level of a class was established as the mean of the CQT scores of the students in the class. Five levels of verbal ability were established to group classes for comparison of performance with episode materials. Table 1 shows how classes were categorized.

Episode examinations consisted of forty-item multiple choice tests administered, as stated earlier, to paired classes in pre- and posttest situations. While designed to get some idea of how well students could apply their learning to different situations, the SRSS tests in large part measured student recall of the specific sociological content of the episodes. Learning gain for each ability level was measured by subtracting mean pretest scores from mean posttest scores. Mean pretest scores for each level of ability studying a particular episode were calculated by multiplying the mean class pretest score by the number of students in the class, adding the products for all classes, and dividing by the total number of students at that level of ability. Mean posttest scores were figured in the same way but separately for the classes of institute participants (the stimulus group) and for nonparticipants (the control group). Appendices 1-12 show how the test data were arranged in ten cells; five levels of student ability by two categories of

teacher preparation. The pretest mean score for Episode 1-1 (*Migration Within the United States*) was provided by students studying Episode 1-2 (*Roles of Modern Women*) and vice versa. In the same way students working with Episodes 1-3 and 1-4 provided pretest data for each other and so on for all twelve episodes. Table 3 provides a composite of the data for all twelve of the episodes. When a mean pretest score for an ability level in any particular episode was based upon an N of less than two classes and/or less that fifty students, the gain was omitted from the composite table. Table 4 compares student gain for each level of ability for the stimulus and control groups.

TABLE 3

STUDENT PERFORMANCE ON UNITS IN SOCIOLOGY ACCORDING TO TEACHER PARTICIPATION IN SOCIOLOGY INSTITUTES

Mean Verbal Ability Level of Classes		Institute Participants	Not Participants in Institutes
CQT Score Range		N	N
Very High 52.00-75.00	Episodes	1	3
	Classes*	2	3
	Students	38	143
	Gain**	3.30	2.12
High 43.00-51.99	Episodes	8	12
	Classes*	18	57
	Students	496	1,789
	Gain**	4.06	4.53
Average 36.00-42.99	Episodes	10	12
	Classes*	20	61
	Students	488	2,022
	Gain**	3.77	3.96
Low 28.00-35.99	Episodes	8	12
	Classes*	14	64
	Students	333	2,115
	Gain**	3.34	4.53
Very Low 0.00-27.99	Episodes	7	10
	Classes*	13	28
	Students	292	805
	Gain**	2.74	1.99

*Classes in any ability level were not included if the pretest mean score for any episode was obtained from less than two classes and/or fifty students except for the data for Very High Ability Level of Classes of Institute Participants which is provided for information rather than for comparison.

**Mean posttest score for classes in this cell minus mean pretest score of classes at this ability level.

RESULTS

The results did not support the hypothesis that the students of teachers who participated in sociology institutes would attain higher levels of learning gain than the students of teachers who did not take part in institutes. While there was definitely gain in learning for all classes, the variation between the stimulus and control groups was very small. For three of the five levels of student ability--as shown in Table 4--the students of teachers who were not in any institutes had more gain than the students of institute participants. A lack of statistical significance is evidenced by the fact that seven of the ten cells in Table 3 contained less than thirty cases. The low number of cases for classes categorized as very high in ability (one class in the stimulus group and three in the control group) makes any comparison of the results at that level particularly inconclusive.

TABLE 4

DIFFERENCES IN STUDENT GAIN ACCORDING TO TEACHER PARTICIPATION IN SOCIOLOGY INSTITUTES

Mean Verbal Ability Level of Classes	Comparison of Student Gain*
CQT Score Range	Institute Participants Compared with Noninstitute Participants
52.00-75.00	+1.18**
43.00-51.99	- .47
36.00-42.99	- .19
28.00-35.99	-1.19
0.00-27.99	+ .75

*Gain determined by subtracting mean pretest scores from mean posttest scores for each verbal ability level according to teacher participation in sociology institutes.

**Inconclusive because of low N of institute participants.

Figure 2 shows graphically how student gain varied by ability level for the two groups of teachers. It is noteworthy that the gain of students in the classes of teachers who were institute participants showed a more stable pattern of variation of achievement with ability than did the students in classes of nonparticipant teachers.

The mode of analysis in this study was limited to comparisons of gross indicators of student achievement and learning gain. While the measurement

of individual student ability used in the SRSS evaluation program can be considered very reliable, the grouping of students for this study by class mean scores on the verbal abilities test cannot be regarded as a very precise control for variation in student ability. In the same way grouping teachers by the simple criterion of participation and nonparticipation in sociology institutes leaves unaccounted for a host of relevant variables.

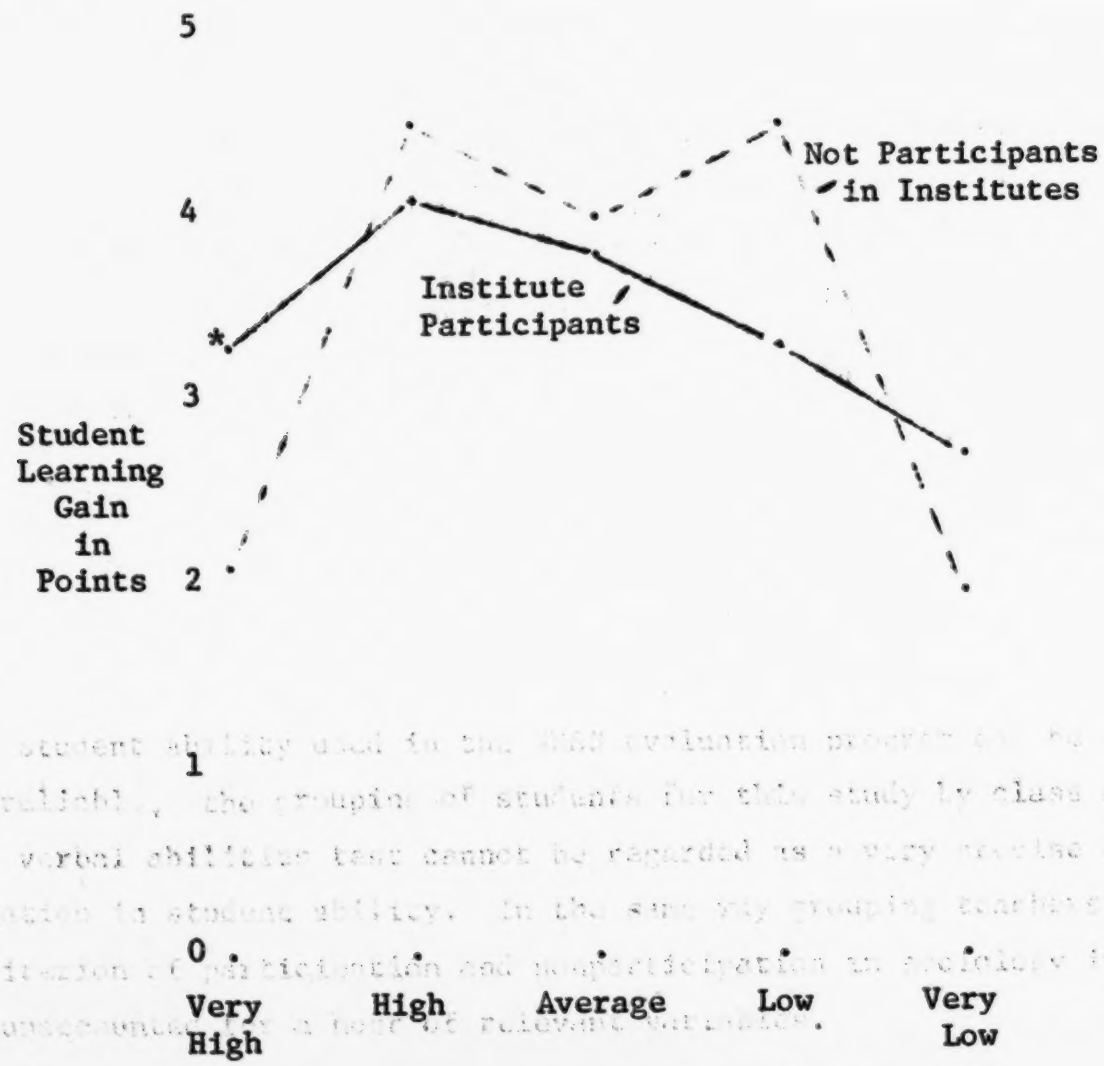

FIGURE 2

*Based on two classes with only 38 students.

Allowing for the limitations of this study (which would include the small numbers of cases in several of the categories of comparison, the cognitive character of the achievement, testing instruments, the selectiveness of the teacher sample--both stimulus and control teachers were volunteers--and, as well the factors mentioned above), it still seems evident that there is little

if any relationship between participation by teachers in sociology institutes and student achievement when controlled for ability.

CONCLUSIONS

Variation in learning gain between the stimulus and control groups was too small to make any inferences about the effect of participation by teachers in in-service institutes on student achievement with experimental curriculum materials in sociology. Thus it is not possible to go on to any higher order questions of analysis in an effort to account for variation between stimulus and control groups.

But the question of whether or not in-service institutes do anything to increase teacher effectiveness remains an important one. Various government and private agencies have spent and continue to spend millions of dollars on teacher training institutes in an effort to improve instruction. Research which sheds light on whether or not this investment has any positive returns, as measured by significant enduring gains in student achievement, is badly needed.

This paper has not provided any data about the nature of the training programs in which institute participants engaged. The author had personal contact with one of the three institutes but could not examine the extent to which the other training programs approached a crucial aspect of the basic assumption underlying the research, namely, that teacher effectiveness, measured by changes in pupil achievement (adjusted for initial ability), could be improved *if the institutes include intensive programs of training in more effective teaching methods*. Traditionally, teachers' institutes in academic subjects do not concentrate on more effective teaching and operate, rather, on a "trickle-down" theory of teaching effectiveness, that is, that competence in the academic discipline will somehow result in an increase in more effective teaching.

While the findings indicate that an in-service institute experience by teachers has little if any relationship with student achievement, it must be

kept in mind that the data provided in this study are very limited in scope and do not take into account other important aspects of the teaching-learning relationship.

The author intends to subject the SRSS episode evaluation data to further, more sophisticated, statistical analysis. The intent of this future research will be to identify and study any factors related to variation in student achievement between the stimulus and control groups.

One possibility for further research is that institute training may provide teachers with the means for raising the achievement of very high ability and very low ability students as suggested (in Table 4 and Figure 2) by the results of this study. Other possibilities will be explored.

NOTES

1. Jack Zevin (*Training Teachers in the Inquiry Method: The Effects of An In-Service Institute on Teacher Behavior in the Inner-City Classroom*, Doctoral Dissertation, The University of Michigan, 1969) found that teachers changed their classroom behaviors significantly towards a model of more "openness," the use of higher order questioning and other elements of more effective teaching, when they took part in an intense program of training in inquiry teaching.

2. William M. Hering, Jr., *The Relationship Between Student Performance on New Curricular Materials in Sociology and Teacher Preparation in Sociology*. A paper delivered at the 1969 meeting of the American Educational Research Association, 'Sociological Resources for the Social Studies (Ann Arbor, Michigan, 1969).

3. Hering compared student achievement on twelve SRSS episodes. He divided students into four ability levels (this study uses five divisions) and compared learning gain in the classes of teachers in three categories of sociological preparation (this study puts teachers in two categories): (1) sociology major or equivalent, (2) three or more courses, and (3) less than three courses. Hering's data were arranged in a twelve-celled table (4 x 3) while this study uses a ten-celled table (5 x 2).

4. Barak Rosenshine, "The Stability of Teacher Effects Upon Student Achievement," *Review of Educational Research*, Vol. 40, No. 5 (December 1970), pp. 647-662.

5. Barak Rosenshine, "Interaction Analysis: A Tardy Comment," *Phi Delta Kappan*, LI, No. 8 (April 1970), pp. 445-6.

6. J. R. Campbell and C. W. Barnes, "Interaction Analysis--A Breakthrough?" *Phi Delta Kappan*, (June 1969), pp. 587-90.

7. Marion J. Rice, *The Effectiveness of Teacher Training as Measured by Pupil Performance*. A paper delivered at the 1970 meeting of the National Council for the Social Studies. Anthropology Curriculum Project, University of Georgia (Athens, Georgia, 1970), mimeographed, 12 pages.

APPENDIX I

Migration Within the United States (Episode 1-1)

Pretest Score of Classes			Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)				
Students	16	Classes	No Cases	No cases
Classes	1	Students		
Mean Score	23.81	Mean Posttest Score		
		Gain		
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)				
Students	87	Classes		5
Classes	3	Students		160
Mean Score	19.33	Mean Posttest Score	No cases	21.94
		Gain		+2.61
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)				
Students	162	Classes	4	2
Classes	6	Students	93	53
Mean Score	19.53	Mean Posttest Score	22.91	19.77
		Gain	+3.38	+.24
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)				
Students	176	Classes	2	6
Classes	7	Students	61	126
Mean Score	17.03	Mean Posttest Score	19.07	18.21
		Gain	+2.04	+1.18
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)				
Students	96	Classes	2	8
Classes	5	Students	60	216
Mean Score	13.65	Mean Posttest Score	17.27	14.50
		Gain	+3.62	+.85

APPENDIX 2

Roles of Modern Women (Episode 1-2)

Pretest Score of Classes		..	Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)				
Students		Classes		1
Classes	0	Students		16
Mean Score		Mean Posttest Score	No cases	19.38
		Gain		--
.. HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)				
Students	209	Classes		1
Classes	7	Students		40
Mean Score	20.95	Mean Posttest Score	No cases	19.55
		Gain		-1.40
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)				
Students	146	Classes	1	5
Classes	6	Students	25	137
Mean Score	19.84	Mean Posttest Score	22.44	21.64
		Gain	+2.60	+1.80
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)				
Students	218	Classes	3	4
Classes	9	Students	74	102
Mean Score	16.01	Mean Posttest Score	20.59	20.03
		Gain	+4.58	+4.02
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)				
Students	276	Classes	2	3
Classes	10	Students	37	59
Mean Score	14.61	Mean Posttest Score	14.68	16.85
		Gain	+.07	+2.24

APPENDIX 3

The Generation Gap (Episode 1-3)

Pretest Score of Classes		Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)			
Students	75	Classes	2
Classes	4	Students	38
Mean Score	20.90	Mean Posttest Score	25.66
		Gain	+4.76
			No Cases
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)			
Students	174	Classes	5
Classes	7	Students	157
Mean Score	15.94	Mean Posttest Score	21.90
		Gain	+5.96
			No cases
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)			
Students	147	Classes	6
Classes	6	Students	143
Mean Score	16.50	Mean Posttest Score	20.07
		Gain	+3.57
			9
			263
			19.86
			+3.36
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)			
Students	103	Classes	2
Classes	5	Students	38
Mean Score	15.45	Mean Posttest Score	18.11
		Gain	+2.66
			9
			231
			.18.17
			+2.72
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)			
Students	62	Classes	4
Classes	3	Students	96
Mean Score	14.91	Mean Posttest Score	14.55
		Gain	-.36
			2
			67
			15.10
			+.19

APPENDIX A

Class and Race in the United States (Episode 1-4)

Pretest Score of Classes			Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)				
Students	38	Classes	1	3
Classes	2	Students	7	68
Mean Score	21.56	Mean Posttest Score	27.43	29.03
		Gain	+5.87	+7.47
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)				
Students	157	Classes	3	4
Classes	5	Students	85	89
Mean Score	15.76	Mean Posttest Score	19.25	25.65
		Gain	+3.49	+9.89
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)				
Students	406	Classes	1	5
Classes	15	Students	25	122
Mean Score	17.44	Mean Posttest Score	22.40	22.05
		Gain	+4.96	+4.61
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)				
Students	269	Classes	2	2
Classes	11	Students	47	36
Mean Score	15.54	Mean Posttest Score	20.49	20.23
		Gain	+4.95	+4.69
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)				
Students	163	Classes	1	2
Classes	6	Students	13	49
Mean Score	12.74	Mean Posttest Score	18.38	16.68
		Gain	+5.64	+3.94

APPENDIX B

Puerto Rico: A Case Study in Population Change (Episode 1-5)

Pretest Score of Classes			Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)				
Students	51	Classes	No cases	2
Classes	2	Students		64
Mean Score	15.53	Mean Posttest Score		29.67
		Gain		+14.14
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)				
Students	211	Classes	2	7
Classes	6	Students	59	189
Mean Score	19.04	Mean Posttest Score	24.88	22.80
		Gain	+5.84	+3.76
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)				
Students	188	Classes	2	5
Classes	7	Students	51	152
Mean Score	17.62	Mean Posttest Score	22.15	21.80
		Gain	+4.53	+4.18
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)				
Students	133	Classes	1	5
Classes	5	Students	21	148
Mean Score	15.69	Mean Posttest Score	17.33	21.34
		Gain	+1.64	+5.65
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)				
Students	160	Classes	1	4
Classes	5	Students	21	87
Mean Score	11.07	Mean Posttest Score	19.19	17.09
		Gain	+8.12	+6.02

APPENDIX C

Meritocracy (Episode 1-6)

Pretest Score of Classes			Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)				
Students	64	Classes		2
Classes	2	Students	No cases	51
Mean Score	26.47	Mean Posttest Score		16.51
		Gain		-9.96
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)				
Students	248	Classes	2	4
Classes	9	Students	52	159
Mean Score	18.62	Mean Posttest Score	22.51	23.75
		Gain	+3.89	+5.16
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)				
Students	203	Classes	2	5
Classes	7	Students	57	131
Mean Score	19.01	Mean Posttest Score	22.26	22.17
		Gain	+3.25	+3.16
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)				
Students	169	Classes	2	3
Classes	6	Students	48	85
Mean Score	16.79	Mean Posttest Score	16.33	17.87
		Gain	-.46	+1.08
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)				
Students	108	Classes	2	3
Classes	5	Students	38	122
Mean Score	14.62	Mean Posttest Score	16.96	11.22
		Gain	+2.34	-3.40

APPENDIX 7

Cities (Episode 2-1)

Pretest Score of Classes		Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)			
Students	68	Classes	1
Classes	1	Students	33
Mean Score	21.64	Mean Posttest Score	27.39
		Gain	+5.75
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)			
Students	325	Classes	3
Classes	8	Students	91
Mean Score	20.61	Mean Posttest Score	24.94
		Gain	+4.33
			7
			181
			22.07
			+1.46
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)			
Students	112	Classes	7
Classes	4	Students	328
Mean Score	17.42	Mean Posttest Score	22.33
		Gain	+4.91
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)			
Students	371	Classes	1
Classes	6	Students	23
Mean Score	16.01	Mean Posttest Score	21.67
		Gain	+5.66
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)			
Students		Classes	2
Classes	0	Students	67
Mean Score		Mean Posttest Score	14.42
		Gain	--

APPENDIX B

The Case of the Non-Patient: A Problem of Medical Care (Episode 2-2)

Pretest Score of Classes		Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)			
Students	33	Classes	1
Classes	1	Students	68
Mean Score	25.83	Mean Posttest Score	22.78
		Gain	-3.05
		No cases	
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)			
Students	272	Classes	8
Classes	10	Students	325
Mean Score	20.00	Mean Posttest Score	27.84
		Gain	+7.84
		No cases	
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)			
Students	328	Classes	1 3
Classes	7	Students	23 89
Mean Score	19.69	Mean Posttest Score	29.00 23.80
		Gain	+9.31 +4.11
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)			
Students	23	Classes	6
Classes	1	Students	371
Mean Score	21.22	Mean Posttest Score	23.16
		Gain	+1.94
		No cases	
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)			
Students	67	Classes	
Classes	2	Students	
Mean Score	14.28	Mean Posttest Score	No cases No cases
		Gain	

APPENDIX B

Soviet Society (Episode 2-3)

Pretest Score of Classes			Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)				
Students Classes Mean Score	0	Classes Students Mean Posttest Score Gain	No cases	No cases
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)				
Students Classes Mean Score	97 4 20.00	Classes Students Mean Posttest Score Gain	2 46 24.24 +4.24	4 135 21.95 +1.95
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)				
Students Classes Mean Score	238 5 18.99	Classes Students Mean Posttest Score Gain	1 22 19.75 +.76	2 53 21.69 +2.70
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)				
Students Classes Mean Score	261 10 14.42	Classes Students Mean Posttest Score Gain	No cases	8 345 18.44 +4.02
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)				
Students Classes Mean Score	60 1 15.61	Classes Students Mean Posttest Score Gain	1 27 16.52	1 43 20.35

APPENDIX 10

Social Basis for Democracy (Episode 2-4)

Pretest Score of Classes			Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)				
Students		Classes		
Classes	0	Students		
Mean Score		Mean Posttest Score	No cases	No cases
		Gain		
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)				
Students	181	Classes	1	3
Classes	6	Students	23	74
Mean Score	19.85	Mean Posttest Score	28.57	21.22
		Gain	+8.72	+1.37
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)				
Students	75	Classes		5
Classes	3	Students		238
Mean Score	15.31	Mean Posttest Score	No cases	23.83
		Gain		+8.52
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)				
Students	345	Classes	1	9
Classes	8	Students	23	238
Mean Score	14.44	Mean Posttest Score	18.96	17.98
		Gain	+4.52	+3.54
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)				
Students	70	Classes		2
Classes	2	Students		91
Mean Score	10.51	Mean Posttest Score	No cases	16.67
		Gain		+6.16

APPENDIX 11

Divorce in the United States (Episode 2-5)

Pretest Score of Classes		Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)			
Students	28	Classes	3
Classes	1	Students	110
Mean Score	6.29	Mean Posttest Score	29.67
		Gain	+23.38
		No cases	
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)			
Students	89	Classes	3 7
Classes	4	Students	97 234
Mean Score	21.19	Mean Posttest Score	25.51 27.93
		Gain	+4.32 +6.74
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)			
Students	144	Classes	1 9
Classes	5	Students	29 332
Mean Score	18.76	Mean Posttest Score	24.76 24.34
		Gain	+6.00 +5.58
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)			
Students	352	Classes	3
Classes	9	Students	79
Mean Score	14.59	Mean Posttest Score	22.77
		Gain	+8.18
		No cases	
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)			
Students	60	Classes	1
Classes	2	Students	11
Mean Score	14.89	Mean Posttest Score	17.45
		Gain	+2.56
		No cases	

APPENDIX 12

Values in Mass Communication (Episode 2-6)

Pretest Score of Classes		Institute Participants	Not Participants in Institutes
VERY HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 52 to 75)			
Students	110	Classes	1
Classes	3	Students	28
Mean Score	24.12	Mean Posttest Score	27.11
		Gain	+2.99
HIGH VERBAL ABILITY LEVEL (Mean CQT Score = 43 to 51)			
Students	331	Classes	2
Classes	10	Students	43
Mean Score	21.94	Mean Posttest Score	22.26
		Gain	+.32
AVERAGE VERBAL ABILITY LEVEL (Mean CQT Score = 36 to 42)			
Students	361	Classes	1
Classes	10	Students	20
Mean Score	17.78	Mean Posttest Score	21.60
		Gain	+3.82
LOW VERBAL ABILITY LEVEL (Mean CQT Score = 28 to 35)			
Students	79	Classes	1
Classes	3	Students	21
Mean Score	16.11	Mean Posttest Score	16.05
		Gain	-.06
VERY LOW VERBAL ABILITY LEVEL (Mean CQT Score = 0 to 27)			
Students	11	Classes	2
Classes	1	Students	60
Mean Score	17.45	Mean Posttest Score	16.41
		Gain	-1.04